

Output results of CLIME (CLustering by Inferred Models of Evolution)

Dataset:

Num of genes in input gene set: 3
Total number of genes: 20834
Prediction LLR threshold: 0

The CLIME PDF output two sections:

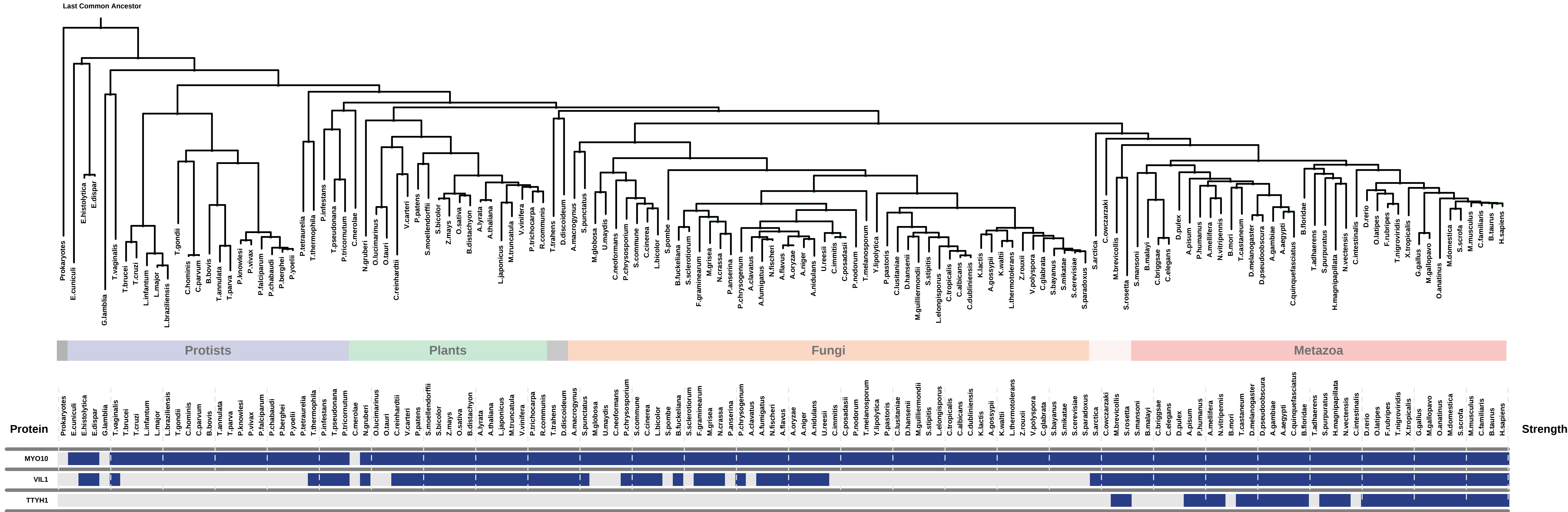
1) Overview of Evolutionarily Conserved Modules (ECMs)

- Top panel shows the predefined species tree.
- Bottom panel shows the partition of input genes into Evolutionary Conserved Modules (ECMs), ordered by ECM strength (shown at right), and separated by horizontal lines.
- Each row show one gene, where the phylogenetic profile indicates presence (blue) or absence (gray) of homologs in each species (column).
- Gene symbols are shown at left. Gray color indicates that the gene is a paralog to a higher scoring gene within the same ECM (based on BLASTP $E < 1e-3$).

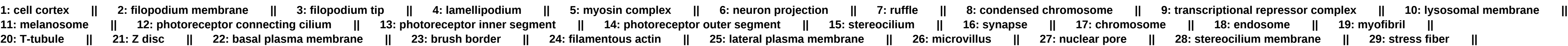
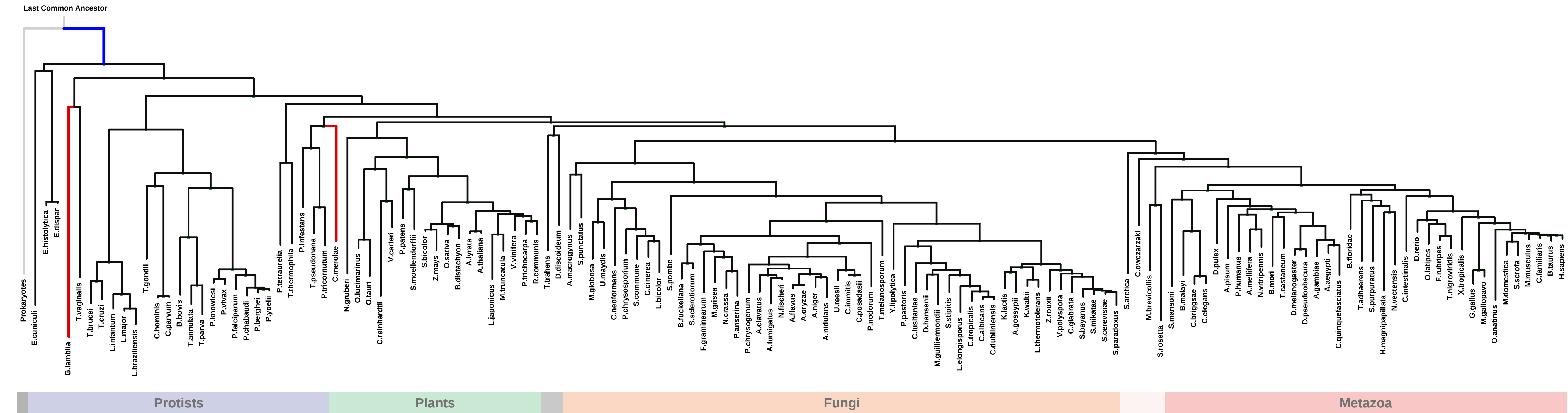
2) Details of each ECM and its expansion ECM+

- Top panel shows the inferred evolutionary history on the predefined species tree. Branch color shows the gain event (blue) and loss events (red color, with brighter color indicating higher confidence in loss). Branches before the gain or after a loss are shown in gray.
- Bottom panel shows the input genes that are within the ECM (blue/white rows) as well as all genes in the expanded ECM+ (green/gray rows). The ECM+ includes genes likely to have arisen under the inferred model of evolution relative to a background model, and scored using a log likelihood ratio (LLR).
- PG indicates "paralog group" and are labeled alphabetically (i.e., A, B). The first gene within each paralog group is shown in black color. All other genes sharing sequence similarity (BLAST $E < 1e-3$) are assigned to the same PG label and displayed in gray.

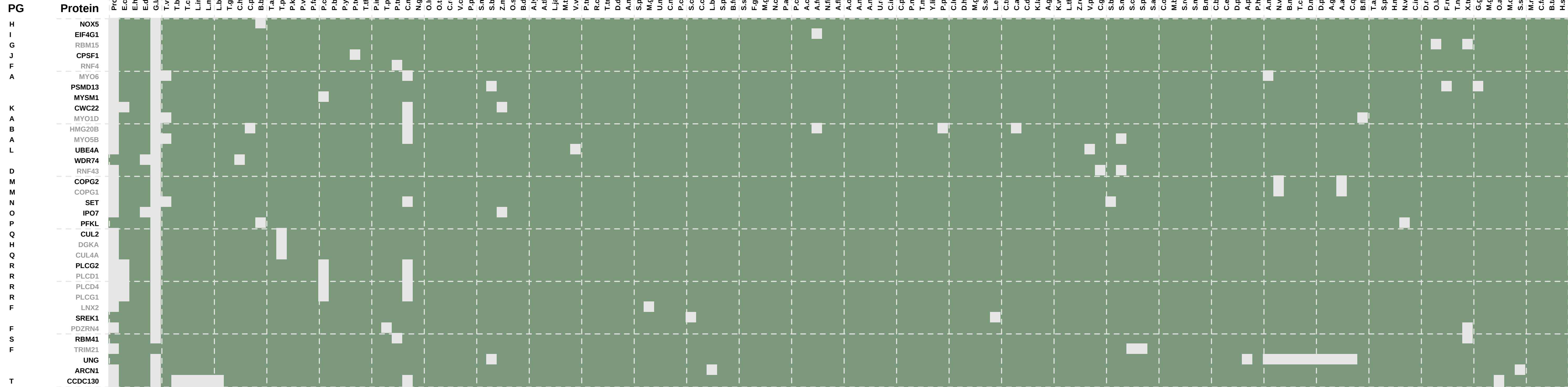
Overview of Evolutionarily Conserved Modules (ECMs)



Num of ECM Genes: 1. Num of Predicted Genes: 500

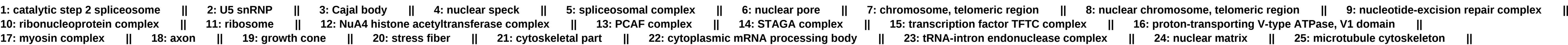
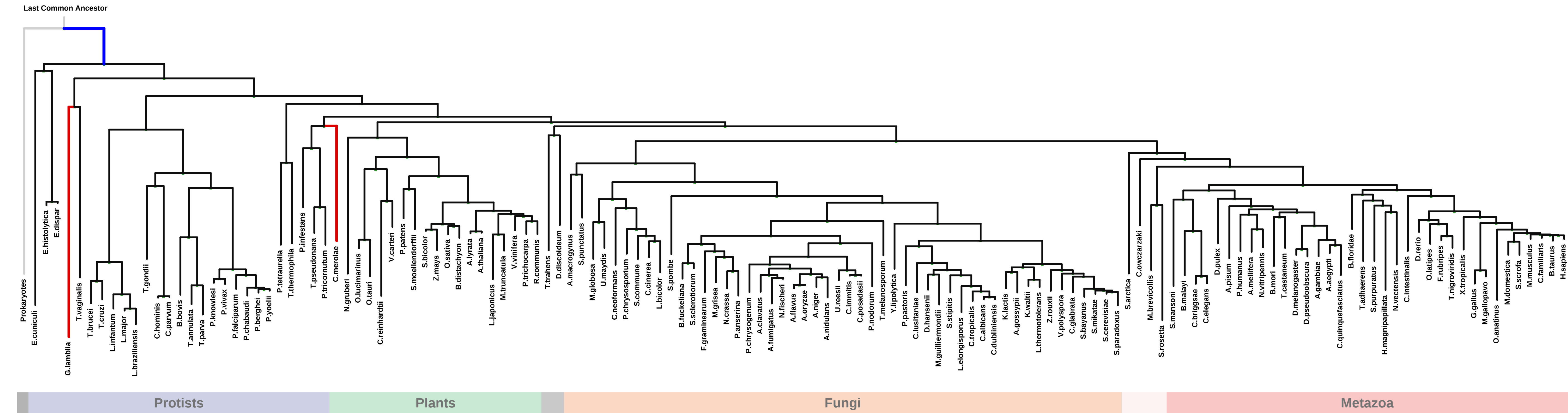


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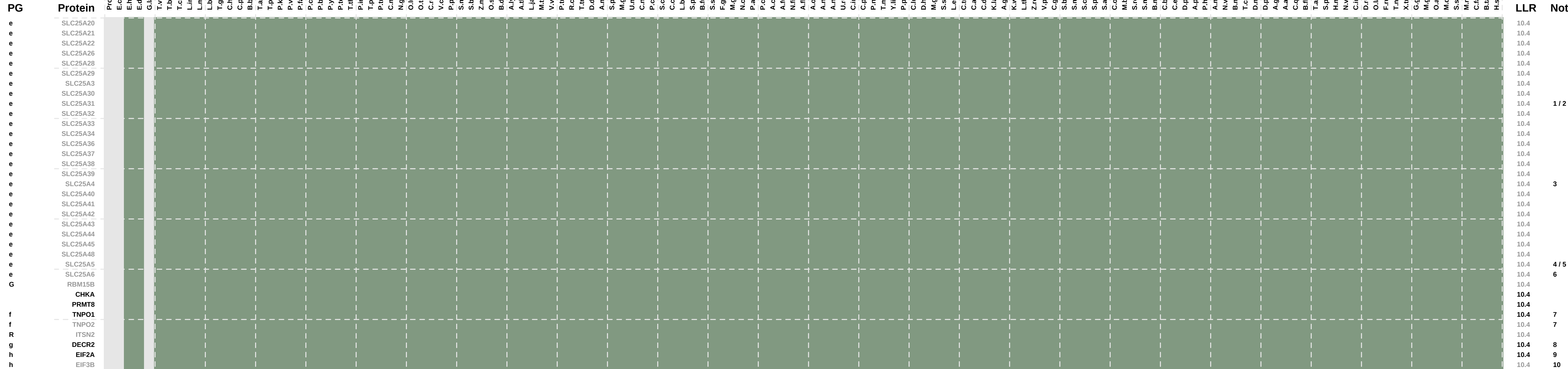


1: eukaryotic translation initiation factor 4F complex || 2: mRNA cleavage and polyadenylation specificity factor complex || 3: microtubule cytoskeleton || 4: PML body || 5: apical part of cell || 6: axon || 7: cell cortex || 8: clathrin-coated endocytic vesicle || 9: clathrin-coated vesicle membrane || 10: coated pit || 11: cytoplasmic membrane-bounded vesicle || 12: DNA-directed RNA polymerase II, holoenzyme || 13: endocytic vesicle || 14: filamentous actin || 15: microvillus || 16: nuclear membrane || 17: ruffle || 18: ruffle membrane || 19: unconventional myosin complex || 20: proteasome accessory complex || 21: proteasome complex || 22: proteasome regulatory particle || 23: chromatin remodeling complex || 24: catalytic step 2 spliceosome ||

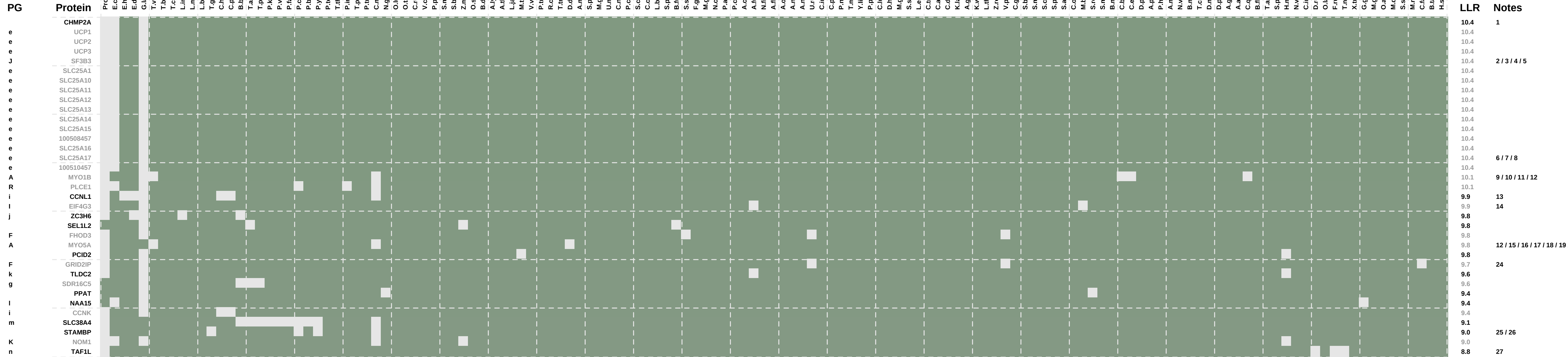
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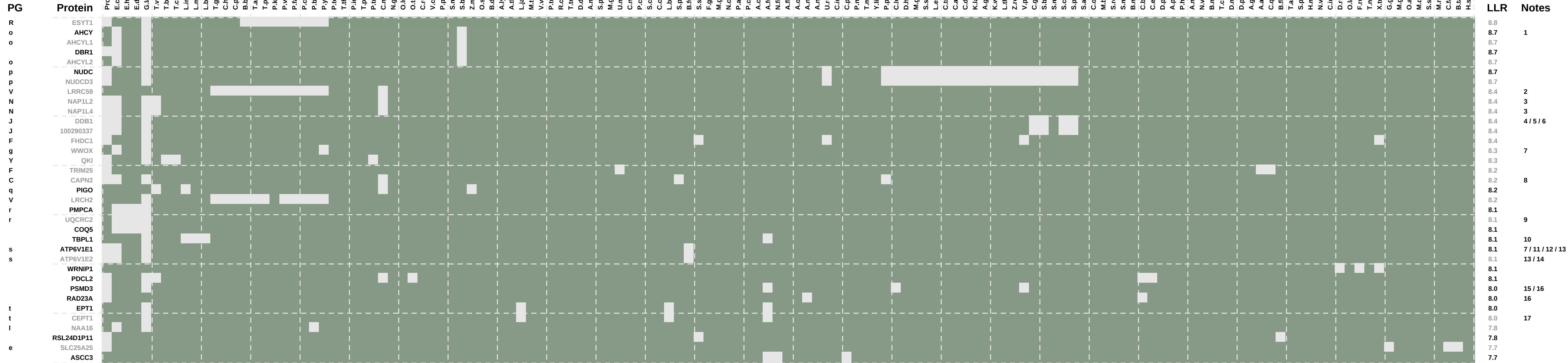


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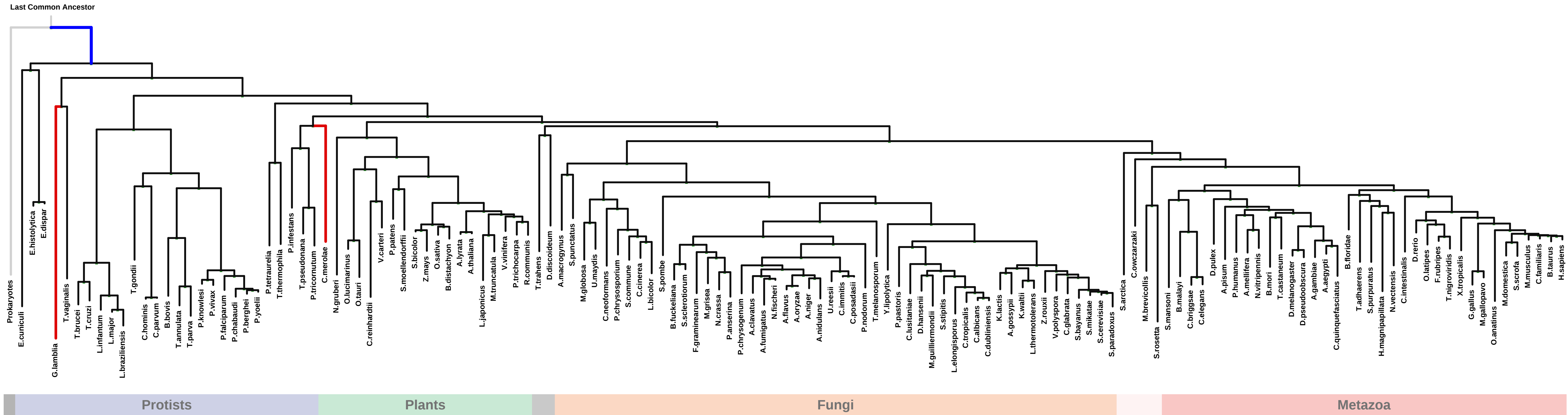
1: late endosome membrane || 2: catalytic step 2 spliceosome || 3: small nuclear ribonucleoprotein complex || 4: spliceosomal complex || 5: U12-type spliceosomal complex || 6: integral to peroxisomal membrane || 7: peroxisomal membrane || 8: peroxisome || 9: brush border || 10: cell periphery || 11: filopodium || 12: myosin complex || 13: nuclear speck || 14: eukaryotic translation initiation factor 4F complex || 15: actomyosin || 16: growth cone || 17: insulin-responsive compartment || 18: intermediate filament || 19: melanosome || 20: microtubule plus end || 21: neuron projection || 22: photoreceptor outer segment || 23: ruffle || 24: postsynaptic membrane || 25: cleavage furrow || 26: early endosome ||

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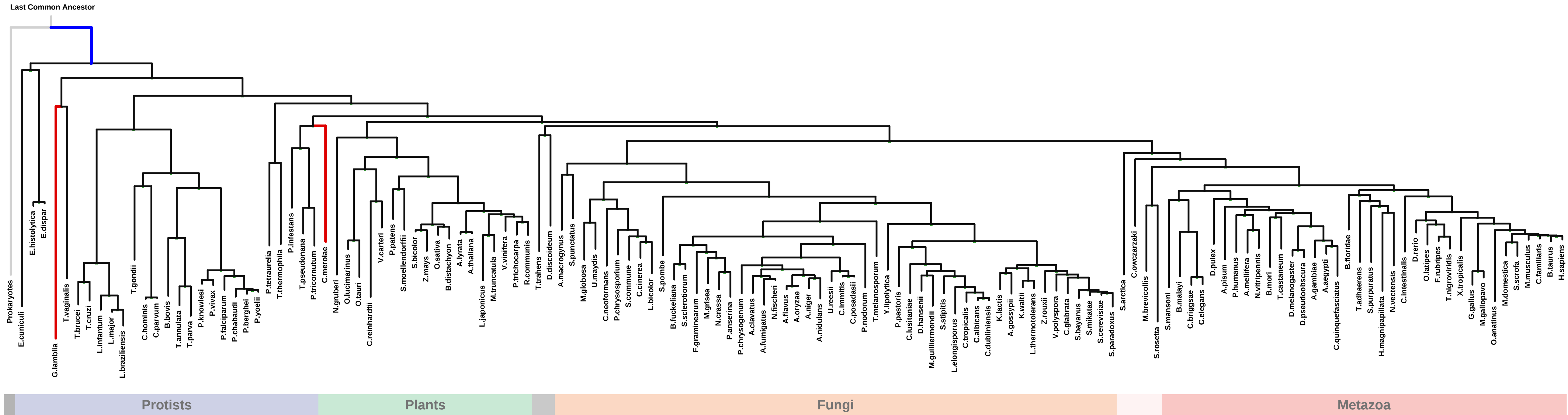


1: melanosome || 2: mitochondrial nucleoid || 3: chromatin assembly complex || 4: Cul4A-RING ubiquitin ligase complex || 5: Cul4B-RING ubiquitin ligase complex || 6: Cul4-RING ubiquitin ligase complex || 7: microvillus || 8: chromatin || 9: mitochondrial respiratory chain complex III || 10: transcription factor TFIIA complex || 11: endosome || 12: proton-transporting two-sector ATPase complex || 13: proton-transporting two-sector ATPase complex, catalytic domain || 14: acrosomal vesicle || 15: proteasome accessory complex || 16: proteasome complex || 17: nuclear membrane

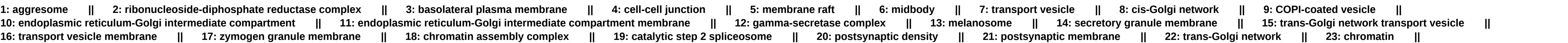
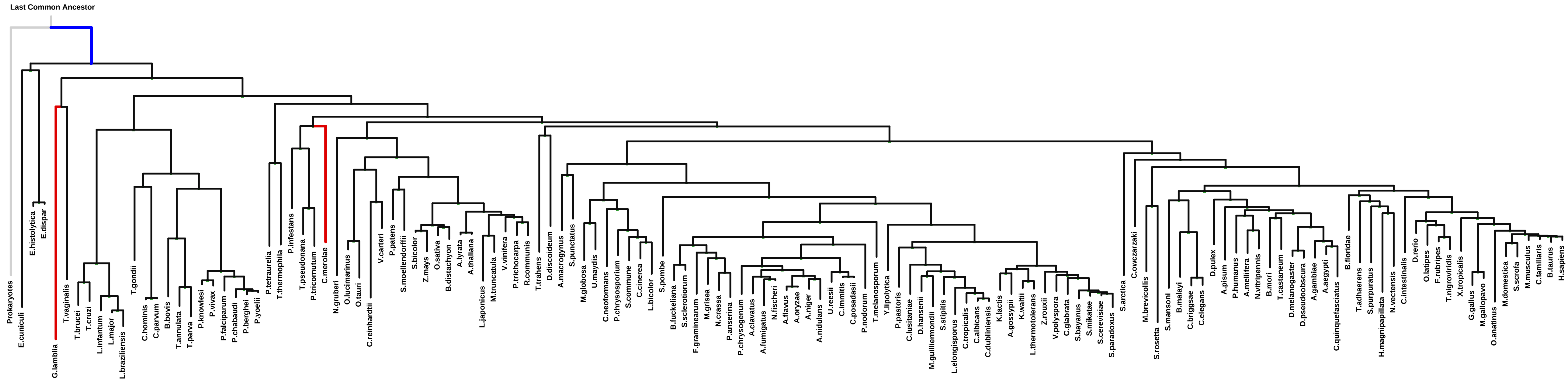
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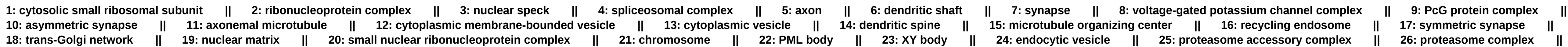
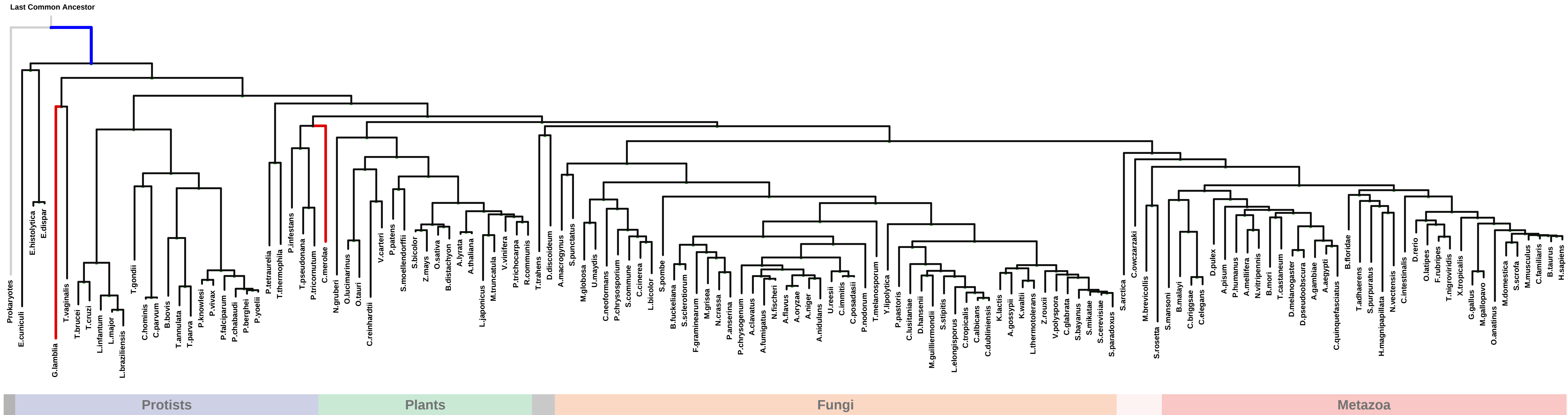
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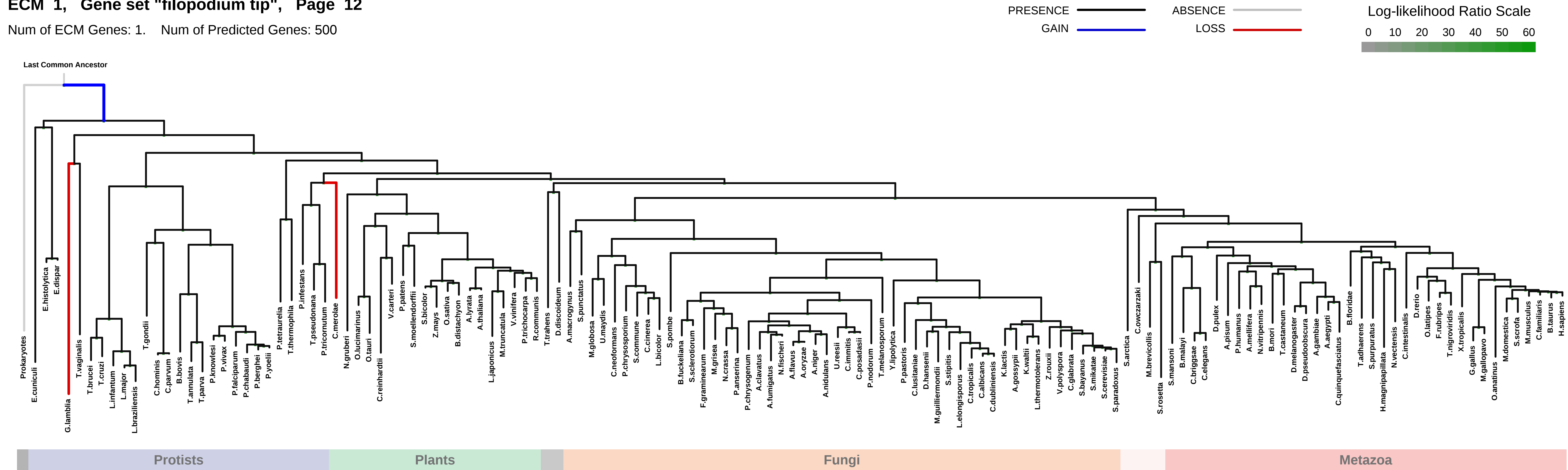
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1: catalytic step 2 spliceosome || 2: nuclear speck || 3: spliceosomal complex || 4: microtubule cytoskeleton || 5: mitochondrial intermembrane space || 6: mitochondrial nucleoid || 7: Cul3-RING ubiquitin ligase complex || 8: midbody || 9: signalosome || 10: cytosolic small ribosomal subunit || 11: ribonucleoprotein complex || 12: ribosome || 13: mitochondrial envelope || 14: chromosome, telomeric region || 15: condensed nuclear chromosome || 16: Mre11 complex || 17: nuclear chromatin || 18: DNA replication factor C complex || 19: nuclear replication fork || 20: PCNA-p21 complex || 21: actomyosin || 22: endoplasmic reticulum-Golgi intermediate compartment || 23: myosin complex || 24: actin cytoskeleton ||

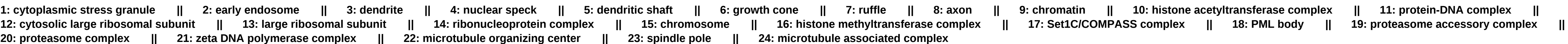
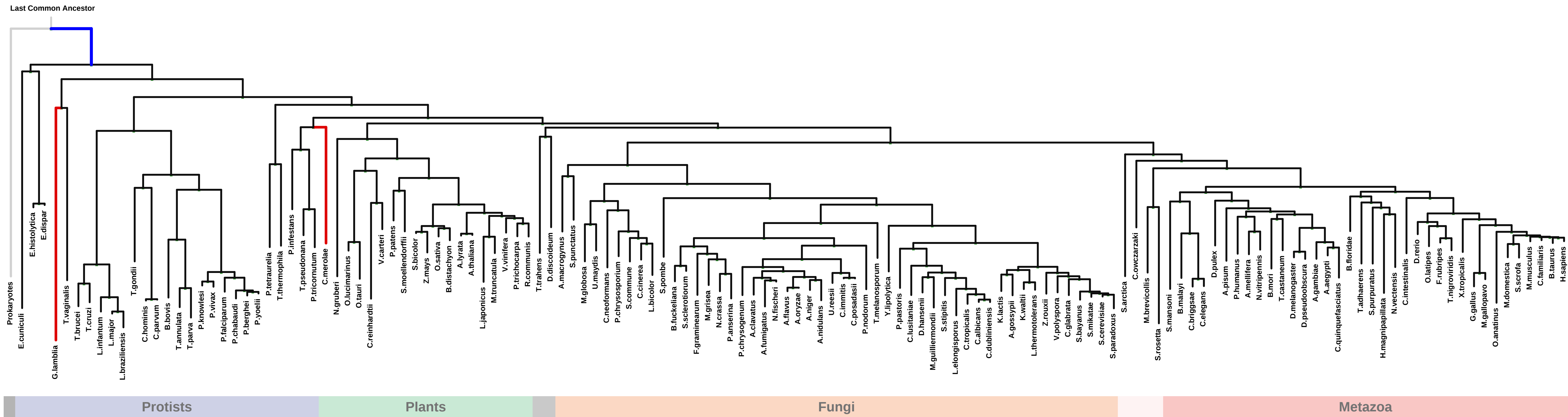
ECM 1, Gene set "filopodium tip", Page 12

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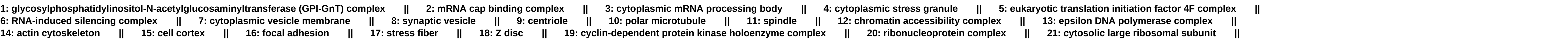
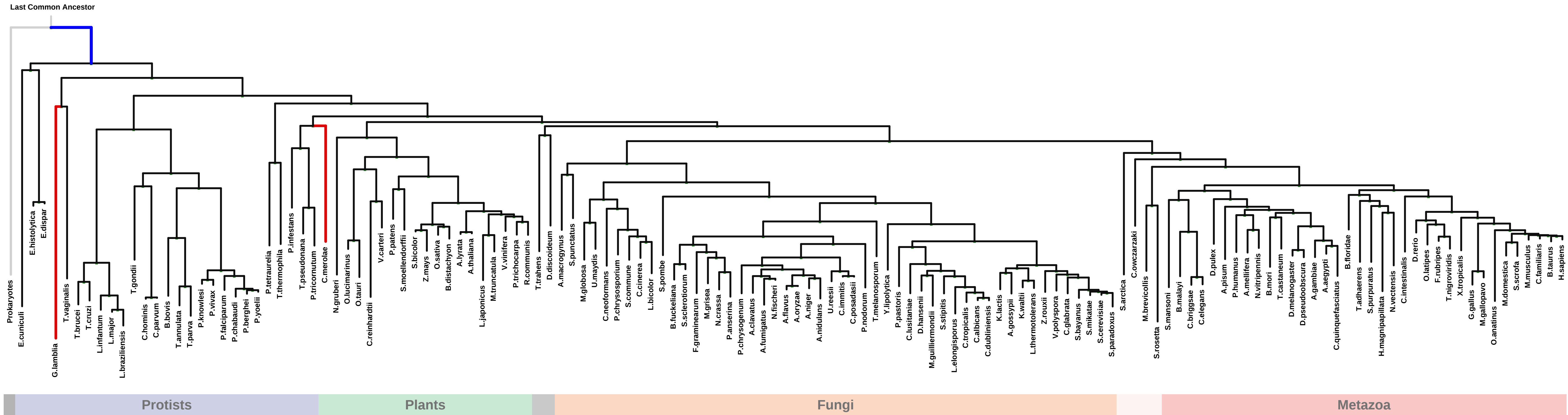
[illegible]

1: autophagic vacuole || 2: autophagic vacuole membrane || 3: axon || 4: cytoplasmic vesicle || 5: dendrite || 6: endomembrane system || 7: microtubule associated complex || 8: organelle membrane || 9: late endosome || 10: adherens junction || 11: axon hillock || 12: axon initial segment || 13: cell body fiber || 14: node of Ranvier || 15: nuclear matrix || 16: PML body || 17: spectrin || 18: chromosome || 19: apical part of cell || 20: caveola || 21: endocytic vesicle membrane || 22: cytosolic large ribosomal subunit || 23: ribosome || 24: catalytic step 2 spliceosome || 25: mitochondrial ribosome || 26: small ribosomal subunit || 27: aminoacyl-tRNA synthetase multienzyme complex ||

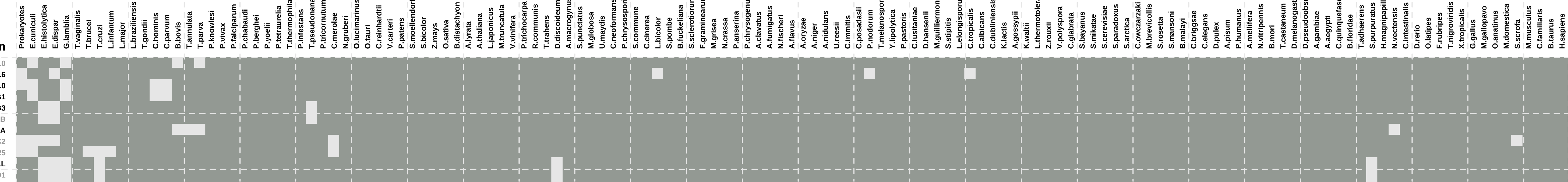
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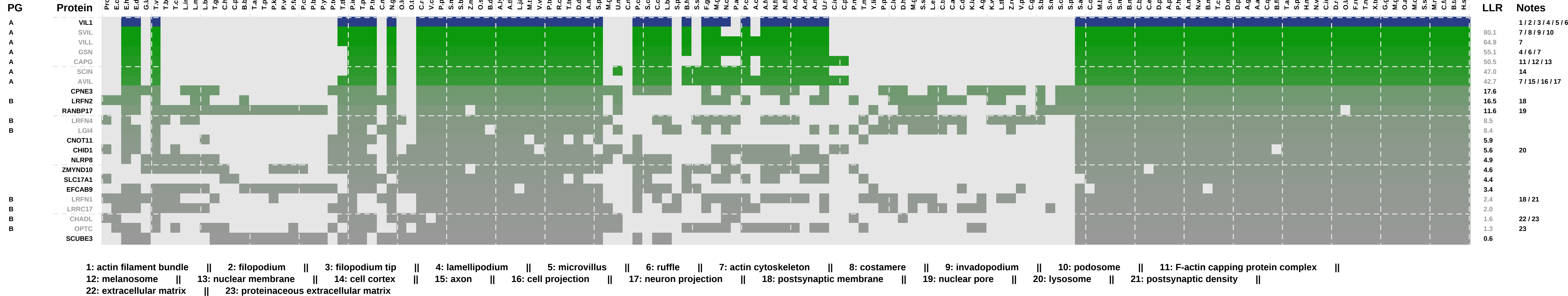


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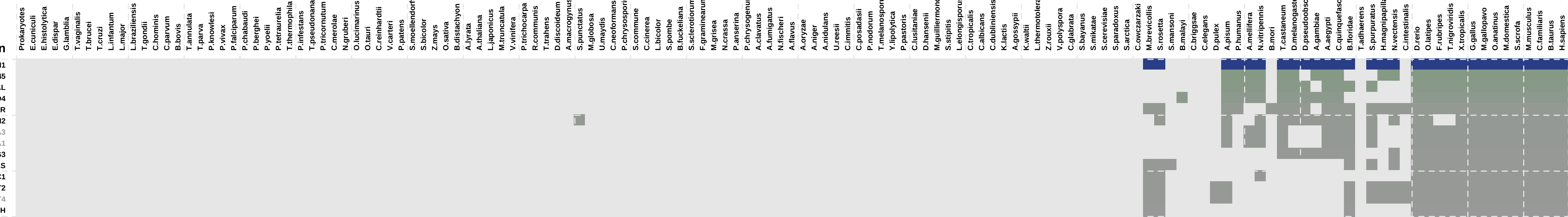


1: cytoplasmic microtubule || 2: eukaryotic translation initiation factor 2B complex || 3: glycerol-3-phosphate dehydrogenase complex

Num of ECM Genes: 1. Num of Predicted Genes: 22



Num of ECM Genes: 1. Num of Predicted Genes: 13



1: chloride channel complex || 2: filopodium membrane || 3: filopodium tip || 4: smooth endoplasmic reticulum membrane || 5: early endosome || 6: endoplasmic reticulum lumen || 7: external side of plasma membrane || 8: membrane raft || 9: T cell receptor complex || 10: stereocilium || 11: anchored to membrane || 12: extrinsic to membrane || 13: CD95 death-inducing signaling complex || 14: death-inducing signaling complex || 15: Golgi cisterna membrane || 16: outer membrane